

REMARKS

The last Office Action of September 2, 2009 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 35–39, 41–43, and 46–49 are pending in the application.

Claim 35 has been amended by incorporating the subject matter of claim 36 which has been canceled. Claims 35, 37–39, 41–43, and 46–49 remain in the application. No fee is due.

Support for the term “singular active element” can be found in paragraph [0021] of the published application 2005/0148404 which discloses “singular regions or vibrational elements F1.” The word “predefined” has been inserted in connection with “location” to provide proper antecedent basis for claim 39.

Claim Rejections – 35 U.S.C. §112

Claims 35–39, 41–43, and 46–49 stand rejected under 35 U.S.C. §112, first paragraph. This rejection has been addressed by removing references to a center of the active elements. Withdrawal of this rejection is respectfully requested.

Claim Rejections – 35 U.S.C. §102

Claims 35–39, 42, 43, 46 and 48 stand rejected under 35 U.S.C. §102(e) as being anticipated by Monette (US 5,683,308). This rejection is respectfully traversed.

Apparently, the examiner assumes that a harmonic series is produced with the arrangement of the discs (40, 42, 44), which would result in natural oscillations characteristic of such harmonic series. In addition, the examiner appears to assume that the “sensation” or “feel” of the player would necessarily lead to a harmonic series.

However, this is not the case. A golf club is inherently asymmetric, due to the handle which is made thicker than the body, as well as the impact part. Accordingly, the natural oscillations of a golf club are not defined by any harmonic series, but are much more complex, as shown, for example, in Wright et al. (US 6,431,996; previously of record). The "feel" of a player would therefore suggest arranging the discs (40, 42, 44) in a way that is not represented by a harmonic series with its precise geometric requirements.

The inventor therefore deviates from the basic concepts disclosed in Monette (but also in the previously cited patent to Wright) and suggests that the active elements should be arranged in a strictly harmonic series.

It is to be taken into consideration, said each impacting instrument, for example a golf club, a baseball bat or in other impacting instrument, have significant asymmetries, with their response depending on where and impact is received.

Such differences are not taken into account with the present invention. Instead, the present invention proposes to select a strictly harmonic series for the arrangement of the active elements independent of the natural oscillations of the respective impacting instrument.

The present invention is therefore just the opposite of the state of the art of record.

The inventor has observed that using a strictly harmonic series leads to significant improvement in the oscillation (vibration) characteristic of an impacting instrument, although conventional approaches always require the measurement of the natural oscillation. More particularly, must be taken into account that the "feel" of a player does not represent anything else but a measurement, wherein it is nearly impossible because of the various adjustment possibilities of the plurality of discs 40, 42, 44 in Monette to place the discs purposely at the proper locations. This is also due to the fact that both the handle position (grip) and the location of the impact on the surface of the impacting instrument are somewhat different with each impact.

More particularly, applicant wishes to point out that the amended claim 35, which includes the subject matter of previous dependent claim 36, now canceled, is not anticipated by the arrangement of Monette, where the discs 40, 42 and 44 are

arranged with increasing spacing, as particularly shown in FIGS. 1, 2 and 3. The result, however, is not a superposition of two or more harmonic series, so that amended claim 35 can not be inferred from Monette.

Applicant also wishes to point out that in the previously applied US patent 6,431,996 to Wright, the number of higher harmonics is limited, because the regions 302, 304 depicted in FIG. 8 of Wright extend over a much longer distance and will not support modes above a certain number which, however, can be achieved with the present invention.

Claim Rejections – 35 U.S.C. §103

Claims 47 and 49 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Monette in view of Yamagushi (US 4,928,965).

Claims 47 and 49 depend from claim 35. Monette has been discussed *supra* as failing to disclose all the limitations of amended claim 35. Yamagushi discloses the design of a golf club head so that the mechanical impedance of the club head is at a minimum at a frequency where the ball to be struck also has a minimum impedance. However, Yamagushi does not address the design of the actuating part.

Accordingly, because Monette and Yamagushi, taken alone or in combination, do not teach or suggest at least the specific arrangement of the actuating elements along the actuating part as a harmonic series, amended claim 35 is patentable over the art of record. Claims 36–49, 41–43, and 46–49, which depend from claim 35, are then also patentable for at least the reasons that claim 35 is patentable.

Withdrawal of all rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

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